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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/018,267	04/15/2002	Don W. Cochran	PSS 2 0067	8745

7590 03/22/2004
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EXAMINER

PHAM, HOA Q

ART UNIT	PAPER NUMBER
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2877

DATE MAILED: 03/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/018,267	COCHRAN ET AL.	
	Examiner	Art Unit	
	Hoa Q. Pham	2877	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 December 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "the source of near IR electromagnetic radiation" in lines 8-9. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 15, 18-20 and 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al (5,866,917) in view of Jones (59,59,731).

Regarding claims 15, 18, 19 and 24, Suzuki et al discloses a means for generating non-visible electromagnetic radiation (column 2, line 1 or column 7, lines 24-25); means (5) for sensing the non-visible electromagnetic radiation reflected from the item (1); and means (9) for determining the attributes (thickness and characteristic value dependent on the thickness) of individual layers of the item (1) (column 8, lines

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62-65, column 13, lines 10-14 and claim 13). Suzuki et al does not explicitly teach that the item (1) is positioned between the light source and the detector so that the detector detects light transmitted through the item; however, such a feature is known in the art as taught by Jones. Jones, from the same field of endeavor, teaches that the thin film (100) is positioned between the light source (400) and the detector (401) so that the film thickness is determined on the basis of the light transmitted through the item (figure 4). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the basic device of Suzuki et al by determining the thickness of the layers on the basis of detecting transmitted light instead of reflected light from the item as taught by Jones if transparent or translucent object is measured.

Regarding claim 20 see figure 2 of Suzuki et al for different spectral ranges.

Regarding claim 23, see column 7, lines 17-27 of Suzuki et al for infrared light source.

5. Claims 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al and Jones as applied to claim 15 above, and further in view of Wyeth et al (3,778,214) (of record).

Suzuki et al teaches that the infrared absorption is used for measuring the thickness of the transparent layers (column 2, lines 1-3) and does not teach that the transparent layers are the layers of a container. However, Wyeth et al teaches that the container having a plurality of polymer layers is formed on the basis of adding optical absorbing compound (figs. 1 and 10; col. 10 lines 53-66; and col. 12 lines 1-17). Those

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of ordinary skill in the art at the time the invention was made would have found it obvious to use the inspection device of Suzuki et al for inspecting a transparent article, for example, a container having a plurality of polymer layers as taught by Wyeth et al. because Suzuki et al teaches that the device could be used for measuring the thickness of a transparent layer. Thus, it would function in the same manner if the layer of the container were measured.

6. Claims 1-14 and 21-22, rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al in view of Jones and Wyeth et al (of record).

Regarding claims 1-4, 7, 11, the combination of Suzuki et al and Jones is described above. In addition, both Suzuki et al and Jones does not teach that the test object is a container. However, such a features is known in the art as taught by Wyeth et al. Wyeth et al teaches that the container having a plurality of polymer layers is formed on the basis of adding optical absorbing compound (figs. 1 and 10; col. 10 lines 53-66; and col. 12 lines 1-17). Those of ordinary skill in the art at the time the invention was made would have found it obvious to use the inspection device of Suzuki et al for inspecting a transparent article, for example, a container having a plurality of polymer layers as taught by Wyeth et al. because Suzuki et al teaches that the device could be used to measure the thickness of a transparent layer.

Regarding claims 5-6, Suzuki et al teaches the use of Nichrome lamp or others suitable light sources may be used for the same purpose (column 7, lines 24-27). In addition, Jones teaches the use of LEDs (column 3, lines 20-29).

Regarding claims 8-9, 12-13, see figure 2 of Suzuki et al.

Regarding claims 10 and 14, Suzuki et al teach the measurement of the thickness (see abstract).

Regarding claim 21-22, see column 7, lines 17-27 of Suzuki et al for infrared light source.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Trischan et al (5,141,110) discloses a method for sorting plastic articles and Wada et al (4,999,509) discloses an optical measuring device of film thickness.

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of


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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoa Q. Pham whose telephone number is (571) 272-2426. The examiner can normally be reached on 7:30AM to 6 PM, Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on (571) 272-2415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Hoa Q. Pham
Primary Examiner
Art Unit 2877

HP
March 10, 2004